

3. Shell's violations include repeatedly exceeding the site-wide, 12-month rolling emissions limitations on volatile organic compounds ("VOCs") established pursuant to the CAA, APCA, the SIP and Shell's plan approvals.

4. Shell is repeatedly exceeding the site-wide, 12-month rolling emissions limitations on nitrogen oxides ("NOx") established pursuant to the CAA, APCA, the SIP and Shell's plan approvals.

5. Shell is repeatedly releasing prohibited visible emissions from the Plant's flares in violation of the CAA, APCA, the SIP and Shell's plan approvals.

6. The repeated and ongoing CAA and APCA violations at the Plant harm the health and disrupt the lives of the Council's members and other individuals who live, go to school, recreate, and work near the Plant.

7. Plaintiff is unaware of any actions Defendant has taken that are sufficient to eliminate future violations of the types alleged in this Complaint. Absent an appropriate order from this Court, Defendant will continue to release illegal air pollution in violation of the CAA and APCA as described in this Complaint. Plaintiff intends this action to encompass any post-Complaint violations of the type alleged herein.

8. The Environmental Protection Agency ("EPA") has not commenced and is not diligently prosecuting a civil action in federal or state court to require Shell to comply with the CAA. 42 U.S.C § 7604(b)(1)(B).

9. The DEP has not commenced and is not diligently prosecuting a civil action in federal or state court or in litigation before the Environmental Hearing Board to require Shell to comply with the CAA and APCA. 42 U.S.C § 7604(b)(1)(B); 35 P.S. § 4013.6(c).

CITIZEN SUIT PROVISIONS

The Clean Air Act

10. The purpose of the Clean Air Act is “to protect and enhance the quality of the Nation’s air resources so as to promote the public health and welfare and the productive capacity of its population.” 42 U.S.C § 7401(b)(1).

11. The “citizen suit” provision of the CAA allows “any person [to] commence a civil action . . . against any person . . . who is alleged to have violated (if there is evidence that the alleged violation has been repeated) or to be in violation of . . . an emission standard or limitation under this Act[.]” 42 U.S.C. § 7604(a)(1).

12. The CAA defines a “person” to include “an individual, corporation, partnership, association, State, municipality, political subdivision of a State, and any agency, department, or instrumentality of the United States and any officer, agent, or employee thereof.” 42 U.S.C. § 7602(e).

13. An emissions standard or limitation is defined as any requirement under 42 U.S.C. § 7411 or § 7412, any condition or requirement applicable under a SIP approved by the EPA, any Title V permit, or any requirement to obtain a permit as a condition of operations. 42 U.S.C. § 7604(f).

14. The conditions and requirements in Shell’s plan approvals PA-04-00740A, PA-04-00740B, and PA-04-00740C (hereinafter “Plan Approvals”) were issued by DEP pursuant to a SIP approved by EPA and are federally enforceable emission standards or limitations as defined by the CAA citizen suit provision. 42 U.S.C § 7604(f).

The Pennsylvania Air Pollution Control Act

15. The APCA declared the policy of the Commonwealth of Pennsylvania to be “to protect the air resources of the Commonwealth to the degree necessary” for the “protection of public health, safety and well-being of its citizens,” “prevention of injury to plant and animal life and to property,” and the “implementation of the provisions of the Clean Air Act in this Commonwealth.” 35 P.S. § 4002(a).

16. The citizen suit provision of the APCA allows “any person [to] commence a civil action to compel compliance with [the APCA] or any rule, regulation, order or plan approval or permit issued pursuant to this act by any owner or operator alleged to be causing or contributing to a violation of any provision of this act or any plan approval, permit or order issued by the [DEP].” 35 P.S. § 4013.6(c).

17. The APCA defines a person to include any “individual, public or private corporation for profit or not for profit.” 35 P.S. § 4003.

18. Violations of Shell’s Plan Approvals, issued by DEP pursuant to the APCA, are subject to enforcement under the APCA citizen suit provision. 35 P.S. § 4013.6(c).

JURISDICTION AND VENUE

19. This Court has subject matter jurisdiction over this action pursuant to 42 U.S.C. § 7604(a) (regarding citizen suits under the CAA), 28 U.S.C. § 1331 (federal question jurisdiction), and supplemental jurisdiction regarding the APCA claims pursuant to 28 U.S.C. § 1367(a).

20. The citizen suit provision of the CAA grants jurisdiction to the United States District Courts to enforce emission standards or limitations of the CAA, to enjoin violations of the CAA, and to impose appropriate civil penalties. 42 U.S.C. § 7604(a). This Court may also award

costs of litigation, including reasonable attorney and expert witness fees as appropriate. 42 U.S.C. § 7604(d).

21. Pursuant to 28 U.S.C. § 2201(a), this Court may issue a declaratory judgment determining that Defendant has violated the CAA, as well as determining the number of violations Defendant has committed.

22. The Clean Air Act provides that any person who violates any such emission standard, limitation, or other permit condition or requirement may be assessed a civil penalty amount “per day for each violation.” 42 U.S.C. § 7413(b).

23. This Court may compel compliance with the APCA and award civil penalties for violations of the APCA. 35 P.S. §§ 4009.1, 4013.6(c). This Court may also award the costs of litigation, including attorney and expert witness fees. 35 P.S. § 4013.6(f).

24. This Court is the proper venue for this action because the Plant is located within this judicial district. 42 U.S.C. § 7604(c)(1); *see also* 28 U.S.C. § 1391(e) (federal venue provision).

NOTICE

25. On February 2, 2023, Plaintiff provided written notice of repeated and ongoing violations of the CAA and APCA via certified mail to the owners and operators of the Plant, EPA, and the Commonwealth of Pennsylvania. Exhibit 1, Notice of Intent to Sue Letter (Feb. 2, 2023) (“NOI Letter I”).

26. On February 17, 2023, Plaintiff provided written notice of additional, repeated and ongoing violations of the CAA and APCA via certified mail to the owners and operators of the Plant, EPA, and the Commonwealth of Pennsylvania. Exhibit 2, Notice of Intent to Sue Letter (Feb. 17, 2023) (“NOI Letter II”).

27. On February 22, 2023, Plaintiff provided NOI Letters I and II via certified mail to Shell's Agent for Service of Process located in Harrisburg, Pennsylvania. Exhibit 3, Letter to C.T. Corporation System (Feb. 22, 2023).

28. In accordance with the requirements of APCA and the CAA's citizen suit provision and its implementing regulations, NOI Letters I and II included information sufficient to permit Defendant to identify the specific standards, limitations, or orders alleged to have been violated, the activities alleged to be in violation, the person(s) responsible for the alleged violations, the location of the alleged violations, the likely dates of said violations, and the full names and addresses of the parties giving notice. 42 U.S.C. § 7604(b)(1)(A); 40 C.F.R. § 54.3; 35 P.S. § 4013.6(d).

29. NOI Letters I and II also provided written notice of violations of the emission limits and Plan Approval conditions described in the letters that occur after the date of the letter. Exhibits 1 and 2.

30. Plaintiff has satisfied the notice requirements of the CAA and APCA. More than 60 days have elapsed since Plaintiff served the required notice. 42 U.S.C. § 7604(b)(1); 40 C.F.R. Part 54; 35 P.S. § 4013.6(d).

31. Pursuant to the Clean Air Act's citizen suit provision, 42 U.S.C. § 7604(c)(3), Plaintiff has served a copy of the Complaint simultaneously upon the Attorney General of the United States and the EPA Administrator.

PARTIES

32. Plaintiff Clean Air Council is a member-supported, Section 501(c)(3) non-profit environmental organization with thousands of members and offices located in Philadelphia and Pittsburgh, Pennsylvania, and Wilmington, Delaware. The Council serves the Mid-Atlantic region.

33. The Council is dedicated to protecting and defending everyone's right to a healthy environment. It works through a broad range of sustainability and public health initiatives, using public education, community action, government oversight, and enforcement of environmental laws. The Council has a long history of advocating for cleaner air in the Mid-Atlantic region.

34. One of the ways that the Council supports its members is by utilizing the Clean Air Act and other environmental laws to stop air pollution that threatens public health, impairs air quality, harms the environment, and makes it more difficult for its members to live, work, go to school, and recreate in areas that are free from unsafe or illegal pollution. *See* Exhibit 4, Declaration of Eric Cheung.

35. Shell's illegal air pollution threatens public health and the environment and harms the interests of the Council and its members. *Id.*

36. The Council has more than 50 members who live in Beaver County, Pennsylvania. *Id.*

37. The Council's members include, for example, individuals who live, work, own property, or recreate between one half of a mile and six miles to the Plant, breathe in pollution from the Plant, and are concerned about the effects of the Plant's illegal emissions on their short- and long-term health and the short- and long-term health of their families, well-being, recreational interests, aesthetic interests, and property values. *Id.*

38. Members of the Council are exposed to the Plant's pollution and are harmed by the violations alleged in this Complaint. *Id.* Illegal air emissions, smoking flares, and malfunctions at the Plant have resulted in excess emissions of VOCs, NOx, particulate matter ("PM"), benzene, and other harmful pollution, which has diminished the Council's members' use and enjoyment of the areas where they live, work, own property, and recreate. *Id.*

39. The Council's members are concerned about the impact of the Plant's illegal pollution on their health and the health of their families. *Id.* These members see the Plant's flares and smell odors from the Plant and alter or restrict their daily activities in response. *Id.* In some cases, members have suffered headaches or felt nauseous when smelling odors from the Plant. *Id.*

40. The Council's members go outside, recreate, garden, and enjoy their properties less due to the illegal pollution from the Plant. *Id.* One member has chosen to delay starting a family due to the illegal pollution from the Plant. *Id.* Some members fear they may be forced to move away from their current home due to impacts they and their families experience from illegal pollution from the Plant. *Id.*

41. A favorable decision in this case would rectify Defendant's noncompliance with certain laws, abate pollution from the operations of the Plant, and lead to improvements in air quality and redress the concerns of the Council's members.

42. The interests that Plaintiff seeks to protect are germane to its organizational purposes.

43. Neither the claims asserted nor the relief requested require the participation of Plaintiff's individual members in this action.

44. The Council is a non-profit corporation and a "person" under the CAA and APCA. 42 U.S.C. § 7602(e); 35 P.S. § 4003.

45. Defendant Shell, a subsidiary of Shell Oil Company, is a corporation that does business in the Commonwealth of Pennsylvania. Shell is the owner and operator of the Plant and is in control of the Plant's daily operations.

46. Shell is a "person" under the CAA, 42 U.S.C. § 7602(e), and APCA, 35 P.S. § 4003, and the applicable federal and state regulations alleged herein.

SHELL POLYMERS MONACA PLANT

47. The Shell Polymers Monaca Plant is a petrochemical complex that manufactures ethylene and polyethylene, which is used to create plastic products, including single-use plastics.

48. The Plant began producing polyethylene pellets in October 2022. Kimberly Kaal, Environmental Manager, Shell Chemical Appalachia LLC, to Anna Hensel, District Supervisor, Air Quality Program, DEP Southwest Regional Office, *re: Emission Exceedance Report and Mitigation Plan for Shell Chemical Appalachia LLC*, at 3 (Jan. 30, 2023) available at https://files.dep.state.pa.us/RegionalResources/SWRO/SWROPortalFiles/Shell/3.20.23/Final_Shell_Chemical_Technical_Report_20230130.pdf.

49. The Plant encompasses approximately 400 acres on the Ohio River in Beaver County, Pennsylvania, which is located about 30 miles northwest of Pittsburgh.

50. The Plant includes an ethane cracking unit, polyethylene unit, flares, incinerators, a wastewater treatment plant, and various other sources of air pollution. The Plant manufactures ethylene by “cracking” ethane through heating, pressure, and cooling.

51. The Plant manufactures polyethylene by combining ethylene with a related hydrocarbon called a co-monomer and a catalyst.

52. The Plant is capable of producing approximately 1,500,000 metric tons of ethylene and 1,600,000 metric tons of polyethylene each year.

53. The Plant’s flares are grouped into a high pressure (HP) flare system and a low pressure (LP) flare system. Exhibit 5, PA-04-00740C, Section D, Source ID Nos. 204, 205.

54. The HP flare system includes two enclosed ground flares and one elevated emergency flare that are meant to control emissions generated by the Plant’s ethylene and

polyethylene manufacturing lines. Exhibit 6, Shell Polymers, “Shell Polymers Monaca Flare Minimization Plan” at 2, 5 (Sept. 2020).

55. The LP flare system includes three multi-point ground flares that are meant to control emissions generated by the Plant’s polyethylene manufacturing line, among other sources. *Id.*

56. A flare is a combustion device that uses ambient air to burn and dispose of gases generated by industrial manufacturing processes. Flares are used at chemical manufacturing processes like the Plant and other types of industrial facilities.

57. Gas generated by facility operations that is directed to a flare for combustion is known as “vent gas.”

58. Flares are designed, in part, to achieve high combustion efficiency of VOCs and hazardous air pollutants (“HAPs”).

59. “Steam-assisted” flares inject steam (“assist-steam”) that is piped to the flare tip to assist in combustion. “Air-assisted” flares inject air via fans or other means to the flare tip to assist in combustion.

60. The Plant’s HP elevated flare is steam-assisted. Exhibit 6 at 6.

61. The Plant’s HP ground flares are unassisted. *Id.*

62. The Plant’s LP multi-point ground flares are air-assisted. *Id.* at 10.

63. The steam-to-vent gas ratio is one operational parameter that gauges flare operation and combustion efficiency. The net heating value (“NHV”) of the gases in the combustion zone of a flare is another operational parameter that is used to evaluate flare combustion efficiency.

64. The Plant's flares, wastewater treatment plant, and other emission sources emit harmful air pollution, including VOCs, NO_x, PM, carbon monoxide ("CO"), benzene, and other air pollutants.

65. VOCs are defined as any compound of carbon, excluding CO, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participate in atmospheric photochemical reactions, or in other words can react with sunlight and other substances like NO_x to form ozone. 40 C.F.R. § 51.100(s).

66. "Because VOCs create strong odors, even relatively low levels of can cause eye, nose, and throat irritation, headaches, nosebleeds, fatigue (tiredness), nausea, and dizziness. Some people may experience an allergic skin reaction, such as itching, rashes, or hives. People with asthma and other lung illnesses may have their conditions aggravated by exposure to VOCs. Exposure to very high levels of VOCs may cause damage to the liver, kidney, or central nervous system (brain and spinal cord). High levels may also cause vision and memory problems." Ohio Department of Health, *Volatile Organic Compounds* (January 2021); *see also* American Lung Association, *Volatile Organic Compounds*, <https://www.lung.org/clean-air/at-home/indoor-air-pollutants/volatile-organic-compounds> (last visited May 10, 2023).

67. In addition, some VOCs, including benzene, are carcinogens. Benzene causes a variety of serious health problems including anemia, nervous system damage, suppression of immune systems, and leukemia. Agency for Toxic Substances and Disease Registry, *Benzene*, https://www.atsdr.cdc.gov/sites/toxzine/benzene_toxzine.html (last visited May 10, 2023).

68. Ozone exposure can cause numerous health problems in humans, especially respiratory problems, such as coughing, inflammation of and damage to the airways, aggravating lung diseases including asthma, emphysema, and chronic bronchitis, and can even be one of the

causes of asthma. U.S. EPA, *Health Effects of Ozone Pollution*, available at <https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution> (last visited May 10, 2023).

69. Exposure to nitrogen dioxide, a type of nitrogen oxide, is connected to adverse respiratory effects such as exacerbation of asthma and increased rates of asthma-related hospital admissions and emergency department visits. U.S. EPA, *Review of the Primary National Ambient Air Quality Standards for Oxides of Nitrogen*, 83 Fed. Reg. 17226, 17227, 17234–36 (Apr. 18, 2018). Oxides of nitrogen also have adverse effects on vegetation, including decreasing growth and photosynthesis of plants exposed to oxides of nitrogen. U.S. EPA, *Secondary National Ambient Air Quality Standards for Oxides of Nitrogen and Sulfur*, Final Rule, 77 Fed. Reg. 20218, 20224 (Apr. 3, 2012).

70. Nitrogen oxides react with ammonia to form fine particles smaller than 2.5 micrometers in diameter or smaller (“PM_{2.5}”) emissions. U.S. EPA, *Fine Particulate Matter National Ambient Air Quality Standards: State Implementation Plan Requirements*, Final Rule, 81 Fed. Reg. 58010, 58011 (Aug. 24, 2016).

71. Nitrogen oxides can also negatively affect visibility by making the air hazy and difficult to see through. U.S. EPA, *Basic Information about NO₂*, <https://www.epa.gov/no2-pollution/basic-information-about-no2> (last visited May 10, 2023). The presence of NO_x can also lead to the formation of acid rain which can cause the acidification of surface water and resulting harm to aquatic and terrestrial ecosystems. U.S. EPA, *Secondary National Ambient Air Quality Standards for Oxides of Nitrogen and Sulfur*, Final Rule, 77 Fed. Reg. 20218, 20224–25 (Apr. 3, 2012).

72. Black smoke from industrial flares like the flares at the Plant can contain PM and other HAPs. *See, e.g.,* U.S. EPA, *Standards of Performance for New Sources: General Provisions; National Emission Standards for Hazardous Air Pollutants for Source Categories: General Provisions*, Final Rule, 63 Fed. Reg. 24436-01, 24437 (May 4, 1998). EPA has found, for example, that “smoking flares can contribute significantly to emissions of particulate matter 2.5 micrometers in diameter and smaller (PM_{2.5}) emissions.” U.S. EPA, *National Emission Standards for Hazardous Air Pollutants: Generic Maximum Achievable Control Technology Standards Residual Risk and Technology Review for Ethylene Production*, Proposed Rule, 84 Fed. Reg. 54278-01, 54296 (Oct. 9, 2019).

73. PM is a mixture of solid or liquid particles, including organic materials, metals, and ash, which can cause serious health problems when inhaled. *See e.g.* U.S. EPA, *Particulate Matter (PM) Basics*, <https://www.epa.gov/pm-pollution/particulate-matter-pm-basics> (last visited May 9, 2023). While exposure to PM of any size can present health risks, particle size is directly related to the potential for causing health problems, and PM_{2.5} emissions pose the greatest risks due to their ability to penetrate deep into the lungs and enter the bloodstream. *See* U.S. EPA, *National Ambient Air Quality Standards for Particulate Matter*, Final Rule, 62 Fed. Reg. 38,652, 38,655–56 (July 18, 1997).

74. EPA has most recently determined, based on a decades-long review of thousands of peer-reviewed studies and its own assessments, that there is a particularly strong causal link between both short- and long-term exposure to PM_{2.5} emissions and a wide array of serious health risks, including acute and chronic respiratory issues (such as wheezing, difficulty breathing, aggravated asthma, reduced lung function, and chronic obstructive pulmonary disease), cardiovascular issues (such as clogged arteries, irregular heartbeat, congestive heart failure, heart

attacks, and strokes), cancer, reproductive issues, and premature death. U.S. EPA, *National Ambient Air Quality Standards for Particulate Matter*, Final Rule, 78 Fed. Reg. 3086, 3103–04 (Jan. 15, 2013).

75. Risks from PM are especially high in vulnerable populations, such as children, the elderly, and those with preexisting heart or lung disease. *Id.* EPA has not identified any truly safe level of exposure to PM, and health risks generally increase in proportion to increases in PM concentration. *Id.* at 3109 (finding “a strong and robust body of evidence” of serious health effects associated with long- and short-term exposure, even in areas with PM_{2.5} concentrations below the daily and annual standards).

76. It is similarly well-established that reduced visibility and haze associated with air pollution are caused primarily by emissions of “particulate matter, especially fine particulate matter, from inadequate[ly] controlled sources.” U.S. EPA, *Regional Haze Regulations*, Final Rule, 64 Fed. Reg. 35714, 35715 (July 1, 1999) (quoting H.R. Rep. No. 95–294 at 204 (1977)).

77. Exposure to lower levels of CO is most serious for those who suffer from heart disease, and can cause chest pain, reduce the ability to exercise or, with repeated exposures, may contribute to other cardiovascular effects. U.S. EPA, *Basic Information About Carbon Monoxide (CO) Outdoor Air Pollution*, <https://www.epa.gov/co-pollution/basic-information-about-carbon-monoxide-co-outdoor-air-pollution#Effects> (last visited May 10, 2023). Exposure to high levels of CO can cause vision problems, reduced ability to work or learn, reduced manual dexterity, and difficulty performing tasks. Texas Commission on Environmental Quality, *Air Pollution from Carbon Monoxide*, <https://www.tceq.texas.gov/airquality/sip/criteria-pollutants/sip-co> (last visited May 10, 2023).

STATUTORY AND REGULATORY BACKGROUND

National Ambient Air Quality Standards and New Source Review

General

78. The CAA directs EPA to establish national ambient air quality standards (“NAAQS”) for a number of “criteria pollutants” such as NO_x—with nitrogen dioxide measured as the indicator of NO_x—ozone, CO, and PM. 42 U.S.C. § 7409; *see also* 40 C.F.R., Part 50. VOCs are implicated in the formation of ozone and thus are indirectly regulated as criteria pollutants.

79. EPA establishes primary ambient air quality standards for certain pollutants that, “allowing an adequate margin of safety, are requisite to protect the public health,” 42 U.S.C. § 7409(b)(1), and secondary ambient air quality standards that are “requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air.” 42 U.S.C. § 7409(b)(2).

80. With respect to each criteria pollutant, each air quality control region is classified as either in “attainment,” meaning that the area meets the primary or secondary NAAQS; in “nonattainment,” meaning that the area does not meet the primary or secondary NAAQSs; or “unclassifiable,” meaning that the area cannot be classified on the basis of available information. 42 U.S.C. § 7407.

State Implementation Plan

81. Under the CAA’s scheme of cooperative federalism, each state retains “primary responsibility for assuring air quality within the entire” state. 42 U.S.C. § 7407(a). States must adopt and submit to EPA for approval a “State Implementation Plan” (“SIP”), which is a set of laws and regulations that “specify the manner in which national primary and secondary ambient

air quality standards will be achieved and maintained within each air quality control region in such State.” *Id.*; *see also* 42 U.S.C. § 7410.

82. Once EPA approves a state’s SIP, it is published in the Code of Federal Regulations and becomes enforceable under federal law. 42 U.S.C. §§ 7410, 7413; 40 C.F.R. § 52.23.

83. Among other things, SIPs must specifically set forth requirements for permitting programs and implement emission standards and limitations that assure geographic areas either achieve, regain, or remain in attainment status. *See* 42 U.S.C. §§ 7410; 7471; 7502(c).

84. EPA has approved Pennsylvania’s SIP, which is codified at 40 C.F.R. Part 52, Subpart NN, and referenced at 40 C.F.R. § 52.2020. Pennsylvania’s SIP incorporates EPA’s NAAQS by reference. 25 Pa. Code § 131.2.

85. Under the SIP, DEP is the agency tasked with issuing permits and implementing other federal CAA or EPA requirements.

New Source Review

86. Clean Air Act Section 110(a)(2)(C), 42 U.S.C. § 7410(a)(2)(C), requires that each SIP regulate the “modification and construction of any stationary source . . . as necessary to assure that [NAAQS] are achieved, including [via a required] permit program” The Clean Air Act’s requirements for new or modified sources of criteria air pollutants are referred to as the “New Source Review” (“NSR”) program.

87. Under the CAA, a stationary source “means generally any source of an air pollutant except those emissions resulting directly [from a moving vehicle].” 42 U.S.C § 7602(z). A stationary source is “major” if it emits more than 100 tons per year of a pollutant, though lower thresholds apply for certain pollutants that are located in geographic areas that do not meet federal air quality standards. *Id.* § 7602(j).

88. Part C of Subchapter I of the Clean Air Act, 42 U.S.C. §§ 7470–7492, sets forth the New Source Review requirements for preventing significant deterioration of air quality in geographic areas that are in “attainment” or “unclassifiable” status for NAAQS. 42 U.S.C. § 7470; 40 C.F.R. § 52.21. These requirements are referred to as the “Prevention of Significant Deterioration” (“PSD”) program.

89. Part D of Subchapter I of the Clean Air Act, 42 U.S.C. §§ 7501–7515, sets forth the New Source Review requirements in geographic areas that are not in attainment for NAAQS. These requirements are referred to as “Non-attainment New Source Review”.

90. Among other things, all proposed new major stationary sources of air pollutants and certain modifications to existing stationary sources must apply for and receive a permit that meets specific requirements prior to the commencement of construction. 42 U.S.C. §§ 7410(a)(2)(C), 7410(a)(2)(I); 7475(a); 7502(c); 40 C.F.R. § 52.21(j)–(r).

91. DEP established a permit program for newly constructed major stationary sources and certain modifications to stationary sources to control air pollution emissions in order to meet the requirements of the PSD program and Non-attainment New Source Review requirements under the Clean Air Act. 25 Pa. Code §§ 127.81–83, 127.201–218.

92. As part of this program, Pennsylvania must establish emissions limitations for criteria pollutants and other requirements for individual sources to ensure compliance with the requirements of the PSD program and Non-attainment New Source Review requirements. 42 U.S.C. § 7410(a)(2)(C).

93. EPA has approved Pennsylvania’s PSD and Non-attainment New Source Review permit programs. 40 C.F.R. § 52.2020.

New Source Performance Standards

94. Clean Air Act Section 111(b)(1)(A), 42 U.S.C. § 7411(b)(1)(A), requires the EPA to publish and periodically revise a list of categories of stationary sources that, in the EPA's judgment, cause or contribute significantly to air pollution which may reasonably be anticipated to endanger public health or welfare. These categories correspond to distinct manufacturing processes or equipment within a given industry.

95. Once a category is included on the list, Clean Air Act Section 111(b)(1)(B), 42 U.S.C. § 7411(b)(1)(B), requires the EPA to promulgate a federal "New Source Performance Standard" ("NSPS") to regulate emissions from new sources within the category.

96. The Plant's flares are subject to NSPS that prohibit visible emissions except for periods not to exceed a total of five minutes during any two consecutive hours. 40 C.F.R. §§\ 60.18(c)(1); 63.11(b)(4); Exhibit 5, Section D, Source 204 Condition No. 001, Source 205 Condition No. 001.

97. Flares that emit visible emissions for a total of more than five minutes during any two consecutive hours do not "destroy . . . VOC or volatile HAP with a destruction efficiency of 98% or greater." 63 Fed. Reg. 24436-01, 24437 (May 4, 1998).

98. The Plant's flares must also comply with certain design, monitoring, and operating requirements, including minimum net heating value requirements, designed to ensure flares reduce collected emissions by 98%. 40 C.F.R. §§ 60.18(c)–(f), 63.11(b); U.S. EPA, *Standards of Performance for New Stationary Sources: General Provisions; National Emission Standards for Hazardous Air Pollutants for Source Categories: General Provisions*, Final Rule, 63 Fed. Reg. 24,436, 24,437 (May 4, 1998); Exhibit 5, Section D, Source 204 Condition Nos. 008 and 009, Source 205 Condition Nos. 004 and 005.

Enforcement of the CAA and APCA

99. Plaintiffs may enforce violations of SIP provisions, including violations of construction and operation permits issued pursuant to the SIP. 42 U.S.C. § 7604(f); 35 P.S. § 4013.6(c).

100. The CAA and APCA authorize plaintiffs to bring a judicial enforcement action for a permanent or temporary injunction to address CAA and APCA violations, as well as to seek civil penalties. 42 U.S.C. § 7604(a); 35 P.S. §§ 4009.1, 4013.6(c).

101. Civil penalties for violations of the CAA are subject to a mandatory inflation adjustment under EPA's 2023 Civil Monetary Penalty Inflation Rule, promulgated pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990 as amended by the Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015. U.S. EPA, *Civil Monetary Penalty Inflation Adjustment*, Final Rule, 88 Fed. Reg. 986, 989 (Jan. 6, 2023).

102. Per these mandatory adjustments, which are codified in Tables 1 and 2 of 40 C.F.R. § 19.4, a defendant is liable for \$117,468 per day, per violation of the CAA occurring after November 2, 2015. *See* 40 C.F.R. § 19.4.

103. The APCA provides that any person who violates any such emission standard, limitation, or other permit condition or requirement may be assessed a civil penalty in the amount of \$25,000 “per day for each violation.” 35 P.S. § 4009.1(a).

104. In 1990, the CAA was explicitly amended to state that a violation may be “established by any credible evidence (including evidence other than the applicable test method).” 42 U.S.C.A. § 7413(e).

105. Pursuant to Section 7413(e), EPA's 1997 Credible Evidence Revisions rule (“Credible Evidence Rule”) established that “EPA, States, *and citizens*” may “prosecute actions

based exclusively on any credible evidence, without the need to rely on any data from a particular reference test.” U.S. EPA, *Credible Evidence Revisions*, Final Rule, 62 Fed. Reg. 8314, 8315–8316 (Feb. 24, 1997) (emphasis added), available at <https://www.govinfo.gov/content/pkg/FR-1997-02-24/pdf/97-4196.pdf>.

106. The Credible Evidence Rule states that “credible evidence” that can establish a source’s noncompliance include, *inter alia*, “engineering calculations, indirect estimates of emissions . . . continuous emissions monitoring (CEM) data and well-chosen parametric monitoring data, such as the operating temperature and air flow rate” of a unit. *Id.* at 8315.

107. Accordingly, 40 C.F.R. § 60.11(g) states that for the purpose of establishing whether or not a person has violated or is in violation of any standard in this part, “nothing in this part shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.”

SHELL POLYMERS MONACA PLANT PLAN APPROVALS AND REPORTED EMISSIONS

108. The Shell Plant is a stationary source within the meaning of the CAA, 42 U.S.C. § 7602(z), and is a major source of VOC, NO_x, CO, PM₁₀, and PM_{2.5} emissions for purposes of NSR. *See* Technical Review Memo from Melissa Jativa, DEP, to Air Quality Permit File PA-04-00740C, 10–13 (Sept. 22, 2020).

109. All permits to construct and temporarily operate new major stationary sources of air pollution in Pennsylvania—called “plan approvals”—“must incorporate by reference the emission and performance standards and other requirements of the [APCA], the Clean Air Act” or the regulations adopted thereunder. 25 Pa. Code § 127.12b; *see* 35 P.S. § 4006.1(b)(2).

110. On January 18, 2015, DEP issued Plan Approval PA-04-00740A pursuant to the EPA approved SIP to Shell to authorize the construction and temporary operation of the Plant.

111. On February 18, 2021, DEP issued Plan Approval PA-04-00740B pursuant to the EPA approved SIP to Shell to authorize the installation and temporary operation of the sulfur hexafluoride (SF₆)-insulated high voltage equipment associated with the cogeneration units of the Plant.

112. On February 18, 2021, DEP also issued Plan Approval PA-04-00740C pursuant to the EPA approved SIP to Shell to authorize “as built” changes in design and construction and to allow the continued construction and temporary operation of the Plant.

113. On September 15, 2022, DEP approved a 180-day extension of all three Plan Approvals until April 23, 2023.

114. On April 6, 2023, DEP approved a second 180-day extension of all three Plan Approvals until October 23, 2023.

115. Among other conditions, Shell is required to limit the Plant’s site-wide VOC emissions to no more than 516.2 tons during any consecutive 12-month period. Exhibit 5, Section C, Condition No. 005. The Plant must comply with this limit at all times. *Id.*

116. Shell is required to limit the Plant’s site-wide NO_x emissions to no more than 328.5 tons during any consecutive 12-month period. *Id.* at Section C, Condition No. 005. The Plant must comply with this limit at all times. *Id.*

117. Shell is also required to restrict visible emissions from the Plant’s flares and incinerators under the CAA and the Plan Approvals. The Plant must comply with these visible emission limits at all times. *Id.* at Section D, Source 205 Condition No. 001, Source 204 Condition No. 001; *see* 40 C.F.R. § 60.18(b)(1).

118. Shell is required to restrict visible emissions from the Plant's high-pressure ground flares and high-pressure emergency elevated flare to no more than "0% except for a total of five minutes during any consecutive two-hour period." Exhibit 5 at Section D, Source 205 Condition No. 001; *see* 40 C.F.R. § 60.18(b)(1).

119. Shell is required to restrict visible emissions from the Plant's low-pressure multipoint ground flares to no more than "0% except for a total of five minutes during any consecutive two-hour period." Exhibit 5 at Section D, Source 204 Condition No. 001; *see* 40 C.F.R. § 60.18(b)(1).

120. Shell is required to design and operate all flares to reduce collected VOC emissions by 98%. Exhibit 5 at Section D, Source 204 Condition No. 004, Source 205 Condition No. 002.

121. Shell must also comply with certain design, monitoring, and operating requirements, including minimum net heating value requirements, designed to ensure flares reduce collected emissions by 98%. *Id.* at Section D, Source 204 Condition Nos. 008 and 009, Source 205 Condition Nos. 004 and 005; 40 C.F.R. §§ 60.18(c)–(f), 63.11(b); *see* U.S. EPA, *Standards of Performance for New Stationary Sources: General Provisions; National Emission Standards for Hazardous Air Pollutants for Source Categories: General Provisions*, 63 Fed. Reg. 24,436, 24,437 (May 4, 1998).

122. Shell must provide DEP with statements of actual emissions of pollutants from the Plant for each reporting period, including NO_x and VOC. Exhibit 5, Section C, Condition No. 16; *see* 25 Pa. Code §§ 127.12b–12c.

123. Shell's actual emissions statements must describe "the method used to calculate the emissions and the time period over which the calculation is based." Exhibit 5, Section C, Condition

No. 16. “The statement shall also contain a certification by a company officer or the plant manager that the information contained in the statement is accurate.” *Id.*

124. Shell submitted statements of actual emissions to DEP, including 12-monthly rolling emissions data for the Plant’s sources and permitted pollutants, on a monthly basis since at least November 7, 2022. Exhibit 7, Shell, 12-Month Rolling Emission Totals (received by DEP Nov. 7, 2022 through Apr. 21, 2023). Each statement reports the Plant’s site-wide emissions of air pollutants, including VOC and NO_x, on a monthly and 12-month rolling basis. *Id.*

125. Prior to the monthly period ending January 31, 2023, Defendant calculated VOC emissions from flares using a destruction removal efficiency (“DRE”) below 99.55%. Exhibit 8, Kimberly Kaal, Environmental Manager, Shell Chemical Appalachia LLC, to Mark Gorog P.E., Regional Manager, Air Quality Program, DEP Southwest Regional Office, *February 21, 2023 Monthly Submittal of Information Requested from Shell Chemical Appalachia LLC* (Feb. 21, 2023).

126. For the monthly period ending November 30, 2022, Defendant reported site-wide 12-month rolling VOC emissions for September 2022 as 522.982 tons; October 2022 as 666.296 tons; and November 2022 as 739.528 tons. Exhibit 7. For the monthly period ending December 31, 2022, Defendant reported site-wide, 12-month rolling VOC emissions for December 2022 as 741.462 tons. *Id.*

127. On December 14, 2022, DEP issued a NOV to Shell for violating the site-wide, 12-month rolling VOC limit in September 2022 and October 2022. Exhibit 1 at Exhibit A. On February 13, 2023, DEP issued a NOV to Shell for violating the site-wide, 12-month rolling VOC limit in November of 2022. Exhibit 2 at Exhibit A.

128. After DEP issued the first NOV for violations of the site-wide, 12-month rolling VOC limit on December 14, 2022, Shell claims to have conducted two tests and one measurement of a flaring event, lasting approximately one hour each, on the northern most totally enclosed ground flare on January 13, 2023, January 19, 2023, and January 20, 2023. Exhibit 9, Providence Photonics, *Shell Monaca FlareGuardianTM Field Study—Final Report* (Jan. 2023).

129. Shell claims that the test performed on the northern most totally enclosed ground flare on January 13, 2023 from 1:45 PM to 1:53 PM measured average DRE at 98.24%. *Id.* Shell claims that the test performed on the same flare on January 19, 2023 from 11:25 AM to 12:23 PM measured average DRE at 99.55%. *Id.* Shell claims that the measurement from the flaring event on the same flare on January 20, 2023 from 8:03 AM to 9:02 AM measured average DRE at 99.62%. *Id.*

130. Beginning with the statement of actual emissions for the monthly period ending January 31, 2023, Defendant began calculating VOC emissions from flares using a 99.55% DRE for the current and historic emissions periods based on the results of the January 19, 2023 test. Exhibits 8 and 9.

131. Defendant retroactively revised its emission reports dating back to at least September 2022 using a 99.55% DRE to purportedly demonstrate that Defendant has not exceeded the 12-month rolling emission limit for VOCs.

| Month | Reported VOC Emissions (tons/12-month period) | Revised VOC Emissions Jan. 31, 2023 (tons/12-month period) |
|----------------|--|---|
| September 2022 | 522.982 | 236.859 |
| October 2022 | 666.296 | 308.112 |
| November 2022 | 739.528 | 354.434 |
| December 2022 | 741.462 | 372.230 |

Exhibit 7.

132. Despite requests from Plaintiff, Shell has not provided data related to all operational parameters that impact DRE for the northern most totally enclosed ground flare during the time of the January 2023 tests.

133. On April 6, 2023, DEP stated that, with respect to VOC emission totals, “Shell has not demonstrated that that [the January 2023 tests] are appropriate. The Department has not accepted these test results.” Exhibit 10, DEP, Notices of Violation to Shell for “12-Month Rolling Emissions Exceedances through January 2023” and “12-Month Rolling Emissions Exceedances through February 2023” (Apr. 6, 2023).

134. Shell has not demonstrated that it is appropriate to calculate VOC emissions from flares using a 99.55% destruction efficiency based on one-hour test for a single flare for emission periods after the January 19, 2023 test.

135. Shell has not demonstrated that it is appropriate to calculate VOC emissions from flares using a 99.55% destruction efficiency based on a one-hour test for a single flare for emission periods prior to the January 19, 2023 test.

136. DEP issued NOVs to Shell for violations of the Plant’s site-wide, 12-month rolling emission limit for NO_x for the 12-month periods ending in December 2022 and January and February in 2023. Exhibits 2 and 10.

137. In addition, Shell must notify DEP each time a malfunction event occurs at the Plant including prohibited visible emissions. Exhibit 5, Section C, Condition No. 18. Malfunction events are defined by Shell’s Plan Approval to include, among other things, “any sudden, infrequent, and not reasonably preventable failure of air pollution control or monitoring equipment[.]” *Id.* “[H]eavy smoke” is one example of a malfunction event. *Id.* Shell must notify DEP of malfunctions

by phone “no later than the next business day after discovery” and by written report no later than thirty days following the end of a malfunction. *Id.*

138. Shell’s written malfunction reports must include, among other information, “[t]he date and time that the malfunction started and ended . . . [and] [a]n estimate of the emissions associated with the malfunction and the calculations that were used to determine that quantity[.]” *Id.*

139. Shell has submitted malfunction reports documenting violations of the prohibition on visible emissions from various flares to DEP. Exhibit 1 at Exhibit D.

140. DEP issued NOVs to Shell for violations of the prohibition on visible emissions. *Id.*

141. Benzene is a VOC, and benzene emissions from the wastewater treatment plant and other sources at the Plant are limited by the site-wide, 12-month rolling emission limit for VOCs.

142. Shell has submitted malfunction reports documenting malodors and excess benzene and other pollutants from the wastewater treatment plant. Exhibit 11, Kimberly Kaal, Environmental Manager, Shell Chemical Appalachia LLC, to Mark Gorog P.E., Regional Manager, Air Quality Program, DEP Southwest Regional Office, *Re: PA-04-00740C Wastewater Treatment Plant (Source ID 502) Malodor and Excess Emissions Malfunction Report* (Jan. 13, 2023), and *Re: Malfunction Report as per PA-04-00740C Malodors from Wastewater Treatment Plant (WWTP) Shell Chemical Appalachia* (Mar. 27, 2023).

143. For example, on April 14, 2023, Shell reported that Shell released 300 pounds of benzene to the air from the wastewater treatment plant. National Response Center, Incident No. 1364790 (April 14, 2023), available at <https://nrc.uscg.mil/>.

144. On January 13, 2023, Shell reported that it released approximately 2 tons of benzene from the wastewater treatment plant between October 4, 2022 and December 13, 2022. Exhibit 11.

145. Shell conducts bi-weekly passive sampling for benzene, n-Hexane, 1-3 Butadiene, Toluene, and Napthalene at twenty (20) monitoring locations along the Plant's fenceline. Shell also uses Photo Ionization Detector ("PID") Analyzers at four (4) locations at the Plant to measure Non-Methane Non-Ethane VOC ("NMNEVOC"). When certain levels of NMNEVOC are exceeded, Shell uses a Summa Canister to sample for benzene, n-Hexane, 1-3 Butadiene, Toluene, and Napthalene.

146. On three separate occasions, monitors located along the Plant's fenceline recorded two-week average concentrations of benzene that exceeded 9 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). Exhibit 12, Shell, Passive Air Monitoring System ("PAMS") Concentration Data (Bi-weekly) for Oct. 11, 2022, Feb. 15, 2022, and Apr. 13, 2023. For context, federal rules require petroleum refineries to take action to investigate and reduce benzene emissions where fenceline benzene concentrations exceed an annual average of 9 $\mu\text{g}/\text{m}^3$. 40 C.F.R. § 63.658. The U.S. Agency for Toxic Substances Disease Registry's (ATSDR) Minimal Risk Level (MRL) for benzene is 29 $\mu\text{g}/\text{m}^3$. Agency for Toxic Substances and Disease Registry, Minimal Risk Levels for (MRLs) for Hazardous Substances (August 2022), available at <https://wwwn.cdc.gov/TSP/MRLS/mrlslisting.aspx>. The ATSDR estimates that exposure to benzene concentrations above 29 $\mu\text{g}/\text{m}^3$ for as little as 24 hours can increase the risk of noncancerous health effects like a weakened immune system. *Id.* California has determined that continuous or repeated eight-hours exposures to benzene concentrations above 3 $\mu\text{g}/\text{m}^3$ over several years could increase the risk of noncancerous health effects, such as damage to blood cells

and a weakened immune system. California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, “Benzene Reference Exposure Levels: Technical Support Document for the Derivation of Noncancer Reference Exposure Levels Appendix D1” (Jun. 2014) available at: <https://oehha.ca.gov/media/downloads/crn/benzenereelsjune2014.pdf>.

147. For the two-week period ending April 13, 2023, the average concentration at one monitor at the Plant’s fenceline was $110 \mu\text{g}/\text{m}^3$. Exhibit 12. Ten additional monitors located along the Plant’s fenceline recorded concentrations above $9 \mu\text{g}/\text{m}^3$, ranging from $10 \mu\text{g}/\text{m}^3$ to $47 \mu\text{g}/\text{m}^3$. *Id.* For the two-week period ending February 15, 2023, the average concentration at one monitor at the Plant’s fenceline was $35 \mu\text{g}/\text{m}^3$. *Id.* For the two-week period ending October 11, 2022, one fenceline monitor recorded an average concentration of $180 \mu\text{g}/\text{m}^3$. *Id.*

148. On April 11, 2023, summa cannister sampling recorded benzene concentrations at $185.02 \mu\text{g}/\text{m}^3$ and $89.32 \mu\text{g}/\text{m}^3$ in two separate locations at the Plant’s fenceline. Exhibit 13, Shell, Continuous Air Monitoring System (CAMS) Photoionization Detector Concentration Data and Summa Canister Analytical Laboratory Results for April 11, 2023.

149. A violation of the Plan Approvals is a violation of the CAA and APCA because the Plan Approvals were issued pursuant to a SIP approved by EPA, and Plaintiff may enforce violations of the conditions of the Plan Approvals under the citizen suit provisions of the CAA and APCA. 42 U.S.C. § 7604(f); 35 P.S. § 4013.6(c).

VIOLATIONS OF THE CLEAN AIR ACT AND PENNSYLVANIA AIR POLLUTION CONTROL ACT

150. Each type of violation alleged in the First, Second, and Third Claims for Relief occurred more than once and therefore was “repeated” within the meaning of 42 U.S.C. § 7604(a)(1).

FIRST CLAIM FOR RELIEF
(Violations of Site-Wide, 12-Month Rolling VOC Emission Limitation)

151. Paragraphs 1–150 are re-alleged and incorporated by reference.

152. Defendant’s Plan Approval PA-04-00740C, Section C, Condition No. 005 imposes a site-wide, 12-month rolling emissions limitation of 516.2 tons of VOCs from the Plant. The Plant must comply with this limit at all times.

153. Based on Shell’s self-reported emissions submitted to DEP and subject to a reasonable opportunity for investigation and discovery, the Defendant emitted at least the following amounts of VOCs during the 12-month periods ending between September 2022 through March 2023:

| Month | VOC Emissions (tons/month) | VOC Emissions (tons/12-month period) |
|----------------|-------------------------------|---|
| September 2022 | 512.203 | 522.982 |
| October 2022 | 143.852 | 666.296 |
| November 2022 | 74.318 | 739.528 |
| December 2022 | 26.54 | 764.343 |
| January 2023 | 25.601 | 789.944 |
| February 2023 | 27.187 | 817.131 |
| March 2023 | 23.031 | 840.159 |

Exhibit 7.

154. The monthly VOC emissions for September 2022 through December 2022 in Paragraph 153 are the monthly VOC emissions reported by Shell prior to the monthly period ending on January 31, 2023. *Id.*

155. The monthly VOC emissions reported by Shell for at least January 2023, February 2023, and March 2023 in Paragraph 153 are the monthly VOC emissions reported by Shell in the report for the monthly period ending on March 31, 2023. *Id.* Therefore, the VOC emissions

reported by Shell for the first three months of 2023 are likely an underestimate of actual emissions because Shell began calculating VOC emissions from flares using a DRE of 99.55% for the monthly period ending on January 31, 2023. Exhibit 8.

156. The 12-month VOC emissions in Paragraph 153 are calculated using the monthly VOC emissions reported by Shell to DEP on December 19, 2021. Exhibit 7.

157. Shell has not demonstrated that it is appropriate to calculate VOC emissions from flares using a 99.55% destruction efficiency based on a one-hour test for one flare.

158. Shell has not demonstrated that it is reducing collected VOC emissions from flares by 98%.

159. Shell emitted VOCs in excess of the site-wide, 12-month VOC emission limitation in at least seven 12-month periods ending in September 2022, October 2022, November 2022, December 2022, January 2023, February 2023, and March 2023.

160. Even if Shell emits zero emissions of VOCs for the next five months, Shell will continue to violate the site-wide, 12-month rolling VOC limit until September 2023.

161. Each day of each of the 12-month periods with total emissions in excess of the emission limitation constitutes a separate violation of the Plan Approval, the CAA, and the APCA.

162. Unless restrained by an order of this Court that includes appropriate injunctive relief and civil penalties, the violations alleged in this First Claim for Relief will continue.

SECOND CLAIM FOR RELIEF
(Violations of Site-Wide 12-Month Rolling NO_x Emission Limitation)

163. Paragraphs 1–162 are re-alleged and incorporated by reference.

164. Defendant's Plan Approval PA-04-00740C, Section C, Condition No. 005, imposes a site-wide, 12-month rolling emission limitation of 328.5 tons of NO_x. The Plant must comply with this limit at all times.

165. Based on Shell's self-reported emissions submitted to DEP, the Plant emitted at least the following amounts of NO_x during the 12-month periods ending between December 2022 and March 2023:

| Month | NO_x Emissions (tons/month) | NO_x Emissions (tons/12-month period) |
|---------------|--|--|
| December 2022 | 28.119 | 343.685 |
| January 2023 | 28.293 | 368.829 |
| February 2023 | 28.694 | 393.893 |
| March 2023 | 30.608 | 420.356 |

Exhibit 7.

166. Shell emitted NO_x emissions in excess of the site-wide, 12-month emission limitation in at least four 12-month periods ending December 2022, January 2023, February 2023, and March 2023.

167. Even if Shell emits zero emissions of NO_x for the next five months, Shell will continue to violate the site-wide, 12-month rolling NO_x limit until September 2023.

168. Each day of each 12-month period with total emissions in excess of the permitted 12-month rolling NO_x limit constitutes a separate violation of the Plan Approval, the CAA, and the APCA.

169. Unless restrained by an order of this Court that includes appropriate injunctive relief and civil penalties, the violations alleged in this Second Claim for Relief will continue.

THIRD CLAIM FOR RELIEF
(Violations of Prohibition on Visible Emissions from Flares)

170. Paragraphs 1–169 are re-alleged and incorporated by reference.

171. Defendant’s Plan Approval PA-04-00740C, Section D, Source 205 Condition No. 001 provides that “[v]isible emissions . . . shall not exceed 0% except for a total of five minutes during any consecutive two-hour period” from the Plant’s high-pressure ground flares and emergency elevated flare.

172. Defendant’s Plan Approval PA-04-00740C, Section D, Source 204 Condition No. 001 provides that “[v]isible emissions . . . shall not exceed 0% except for a total of five minutes during any consecutive two-hour period” from the Plant’s multipoint ground flare.

173. Under the CAA, “flares shall be designed for and operated with no visible emissions . . . except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.” 40 C.F.R. § 60.18(b)(1).

174. The Defendant released visible emissions from the Plant’s High-Pressure Elevated Emergency Flare for more than 5 minutes during any 2 consecutive hours on the following days:

| Date | Duration |
|-----------------------|------------------------|
| September 8–10, 2022 | 9 minutes |
| September 18, 2022 | 15 minutes |
| September 21–22, 2022 | 7.5 minutes |
| October 24–26, 2022 | 11 minutes |
| February 13, 2023 | 2 hours and 45 minutes |

Exhibits 1 at Exhibit D; Exhibit 14, Kimberly Kaal, Environmental Manager, Shell Chemical Appalachia LLC, to Mark Gorog P.E., Regional Manager, Air Quality Program, DEP Southwest Regional Office, *Re: PA-04-00740C Ethane Cracking Unit (Source ID 201) Cracked Gas Compressor Upset Event and High-Pressure (HP) Header System (Source ID 205) Excess Emission Report* (Mar. 15, 2023); Exhibit 15, Photos of High-Pressure Elevated Emergency Flare, Breathe Cam, *Shell Plastics West* (Oct. 24, 2022 14:45:33 and Feb 13, 2023 16:12:24), available at <https://breathecam.org/>.

175. The Defendant released visible emissions from the Plant's High Pressure Enclosed Ground Flares for more than 5 minutes during any 2 consecutive hours on the following days:

| Date | Duration |
|--------------------|---------------------|
| September 6, 2022 | Intermittent |
| September 8, 2022 | Intermittent |
| September 13, 2022 | 7 minutes |
| February 13, 2023 | At least 28 minutes |
| March 25–26, 2023 | At least 5 minutes |

Exhibit 1 at Exhibit D; Exhibit 16, Pennsylvania Department of Environmental Protection, Emergency Response Incident Report (Feb. 13, 2023); Exhibit 17, Kimberly Kaal, Environmental Manager, Shell Chemical Appalachia LLC, to Mark Gorog P.E., Regional Manager, Air Quality Program, DEP Southwest Regional Office, *April 2023 Monthly Submittal of Information Requested from Shell Chemical Appalachia LLC* (Apr. 21, 2023).

176. On June 23, 2022, Defendant's Multi-Point Ground Flare released visible emissions for a period of eleven minutes. Exhibit 1 at Exhibit D.

177. Shell violated the Plan Approval, CAA, and APCA when the Plant released prohibited visible emissions from the High-Pressure Elevated Flare, High-Pressure Ground Flare, and Multi-Point Ground Flare.

178. Each two-hour period in which the Plant emitted visible emissions from flares or incinerators for more than five minutes is a separate violation of the Plan Approval, the CAA and the APCA.

179. Unless restrained by an order of this Court that includes appropriate injunctive relief and civil penalties, the violations alleged in this Third Claim for Relief will continue.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully requests that this Court:

A. Declare that Defendant Shell has violated, and is currently in violation of, the Clean Air Act, the Pennsylvania Air Pollution Control Act, and its Plan Approvals;

B. Order the Defendant to take all actions necessary to operate the Plant in compliance with its Plan Approvals and the requirements of the CAA and the APCA;

C. Permanently enjoin Defendant from operating the Plant except in compliance with its Plan Approvals and the requirements of the CAA and the APCA;

D. Order Defendant to take other appropriate actions, including beneficial mitigation projects authorized under the Clean Air Act, 42 U.S.C. § 7604(g)(2), to remedy, mitigate, and offset the harm to public health and the environment caused by the violations alleged above;

E. Assess a civil penalty against Defendant for each violation of the CAA up to \$117,468 per day, per violation pursuant to 42 U.S.C § 7413(b) and 40 C.F.R. § 19.4;

F. Assess a civil penalty against Defendant for each violation of the APCA up to \$25,000 per day, per violation pursuant to 35 P.S. § 4009.1(a);

G. Retain jurisdiction to ensure compliance with its decree;

H. Award Plaintiff its reasonable costs and attorneys' fees as authorized by 42 U.S.C § 7604(d); and

I. Grant such other and further relief as the Court deems just and proper.

Respectfully submitted on this 11th day of May, 2023,

/s/ Lisa Widawsky Hallowell
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**Motion for Pro Hac Vice Pending*